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Promoting Heart Health for Southeast Asians: a Database for Planning Interventions

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Synopsis

This paper is a report of baseline data that the authors collected on the prevalence of hypertension in a sample of 397 Southeast Asian immigrants residing in central Ohio and the implications of those data for the design of ethnically approved and scientifically valid interventions. The context for the collection of these data over a 9-month period in 1989 is described. Baseline demographic characteristics including distributions by ethnicity, sex, age, and length of stay in the United States, as well as family heart health history, hypertension level, and heart health awareness of these subjects are presented. For example, 85 percent of the immigrants did not know what could be done to prevent heart disease. Implications for the design of ethnically approved and scientifically valid prevention strategies are discussed.

Based on these data, the authors realized that multiple health education strategies tailored to what they were learning about Southeast Asians would be needed. Through Southeast Asian leaders, they were led to using wall calendars, with words specific to each Southeast Asian language, that had a monthly heart health slogan as one avenue to reach Southeast Asians.

Another strategy was to develop videotapes featuring cultural content but including heart health "commercials." The authors concluded that, although scientific validity of risk reduction interventions are important, customizing these strategies to ethnically specific modes of interaction are equally important.

IN THE DECADE ending in 1980, Asian Americans and Pacific Islanders, defined by the U.S. Census as a set of U.S. population subgroups whose origins were in "the Far East, Southeast Asia or the Pacific Islands," increased from 1,500,000 to 3,700,000 or an increase of 142 percent (*1*). This percentage increase far exceeds the increases seen in other ethnic groups; for example, for whites the increase was 6.4 percent; for blacks, 17.8 percent; and for Hispanics, 60.8 percent (*2*). Furthermore, from 1980 to 1985, Asian Americans and Pacific Islanders grew to an estimated 5,100,000 (*3*), and by 1990, these numbers will probably exceed 6,500,000 (*4*).

Among the diverse ethnic groups included in the Asian American and Pacific Islander category, the Chinese remain the most numerous; however, the Southeast Asians, also known as Indochinese (that is, Cambodians, Laotians, and Vietnamese), now number more than 1 million and are currently the third largest Asian-origin population in this country, surpassing Cuban Americans as the largest refugee group in the United States (*5*). The most prominent reason for the extraordinary increase of

Southeast Asians in this country was the liberalized immigration policy beginning in 1976, soon after the fall of Saigon. However, in addition to migration, the unusually high fertility rates for Southeast Asian women have also accounted for more than 200,000 children born since the exodus from Southeast Asia (*6*).

As expected, the earlier major health challenges facing Southeast Asians in this country have been related to the disease threats posed by conditions in their countries of origin. For instance, investigators have reported on communicable diseases experienced by Southeast Asians—hepatitis, tuberculosis (*7-9*), and sudden unexplained death syndrome (*10*).

To date, data on the prevalence of risk factors for cardiovascular disease among Southeast Asians have been scant. For example, only two studies of the prevalence of cigarette smoking among Southeast Asian immigrants seem to have been reported. One study was conducted with a sample of 3,220 Vietnamese immigrants in the San Francisco Bay Area and reported by Jenkins and coworkers in 1988 (*11*). They reported a smoking prevalence rate of 57 percent among Vietnamese men and 9 percent among Vietnamese women. The second study was conducted in Cook County, IL, and focused only on Laotians. Levin and coworkers reported a smoking prevalence rate of 72 percent among men and 0 percent among women (*12*). These rates are fairly consistent with the 55 percent for the Southeast Asian men cited in "Healthy People 2000" (*13*). No data have been published on cholesterol levels among Southeast Asians as a risk factor for heart disease.

With reference to the risk factor for hypertension, Stavig and coworkers (*14*) reported on the comparative prevalence of hypertension in their 1979 California Hypertension Study. While the data for other Asian groups such as Chinese, Filipinos, and Japanese were reported as distinct groups, Southeast Asians were classified in the "other Asians" category. Data in this category were suggestive that the weighted percentages of hypertension for men, ages 18-50 or older, and for women, ages 50 or older, were higher than their white counterparts (*14*). These investigators later suggested that Vietnamese and Cambodians had the lowest hypertension awareness rates, drug treatment levels, and control rates among all ethnic groups in California (*15*).

Meanwhile, increasing acculturation with the nonminority culture appears to be one of the factors associated with the risk of ischemic heart disease among Asian Americans and Pacific Islanders (*16*). As acculturation occurs, Asian dietary patterns accommodate more animal protein, fats, and refined sugars while retaining many traditional foods such as salted and pickled vegetables, soy sauce, and other sauces high in sodium. Acculturation may manifest itself in blood pressure levels of Asians living in the United States that are higher than their counterparts in Asia, as studies among Japanese have indicated (*17*). Thus, the paucity of cardiovascular disease risk factor data, particularly the suggestion that hypertension may be a serious problem among Southeast Asians (*11-17*), and the opportunities to engage in a community-based program to promote heart health among Southeast Asians were among the factors that led us to the current project, "Heart Health for Southeast Asians in Franklin County, Ohio."

This paper is a report of baseline data collected on blood pressure levels of a convenience sample of 397 Southeast Asian adults residing in Franklin County (Greater Columbus), Ohio. Its purpose is to report the empirical basis for designing the heart health educational interventions for this Office of Minority Health Program, which was funded for 2 years. The premise of this program is that community health coalitions can effectively promote the reduction of risk factors within minority populations. This was not intended to be a randomized clinical trial, nor was the project focused on data addressing health problems of minorities. Data collection was a secondary focus. However, since data are generally not available for Southeast Asians, they are presented here to depicit a profile of Southeast Asians who, by volunteering to have their blood pressures measured, are also more likely to be among the first to respond to future heart health education activities.

Methods

During fiscal year 1989 (that began for us on November 1, 1988), we held the only grant funded by the Office of Minority Health that was targeted toward the Asian American and Pacific Islander minority groups and historically was the first grant awarded for work among Southeast Asians. The conceptual bases and the administrative conduct of this project are discussed elsewhere (*18*). In summary, 14 lay Southeast Asian adults (6 Cambodians, 5 Laotians, 3 Vietnamese) were trained and certified to measure blood pressure through a standardized American Red Cross course—"How to Measure Blood Pressure." They became known

'. . . while the prevalence of hypertension may be lower than the majority of adult Ohioans, the awareness level of cardiovascular health is very low and the groundwork should be laid now to initiate effective, ethnically approved, and scientifically valid prevention efforts.'

as the cadre. Barriers of culture and language are minimized because of their being Southeast Asian and also bilingual (Cambodian and English, Laotian and English, Vietnamese and English). The effects of having Southeast Asians measuring blood pressures and hence conducting this baseline study achieve many of the benefits of indigenousness desirable in health work (*19*) as well as fulfills the indigenous model for heart health. In this model, persons from the target population are also those who are trained to deliver services to the same target population (*18*).

These cadre in turn recorded subjects' personal health data and blood pressure readings on an adapted and ethnically approved Ohio Department of Health heart health screening form. Adaptations were made to incorporate data on risk factors for cardiovascular disease and to include demographic data particular to our needs for tracking adult Southeast Asians for our 2-year study. Ethnic approval meant that prior to using this form, we asked Southeast Asian community leaders to review, edit, and endorse the use of these questions.

The major purpose of the data collection during the project's first year was to determine the characteristics of our target population and to use this information to design approved and educationally sound interventions. Thus, the cadre collected data and measured blood pressure levels on a convenience sample. Subjects in this study were adults whom the cadre contacted in their homes such as their family members, friends, and those who responded at community sites—at ethnic New Year's celebration sites, at clinics, and at Asian grocery stores where screening took place.

The data for this paper are based on personal health data and the blood pressure measurements of 397 adult Southeast Asians. They were part of the approximately 3,500 adults in the county who consented to participate in this study for the 9-month period commencing with January 11, 1989, the date when data were first collected, through October 31, 1989. All data were collected by the cadre who communicated with participants in the most appropriate language—either their native language or English. (Generally, the cadre contacted participants of their same ethnicity; however, in some instances, when cadre contacted participants of a different ethnicity, English had to be used.)

No record was kept of refusals since the focus was on collecting data on those Southeast Asians who would be open to participating without coersion. The commonality for all data collected was that the cadre were the persons who first explained the idea of blood pressure measurement, secured subjects' written Human Subjects approval forms, interviewed subjects using the project's screening form, measured their blood pressures, and finally explained the significance of the blood pressure measurement obtained. Thirty minutes per subject were usually required to complete these procedures. In certain instances where time was of the essence, that is, screenings at mass gatherings, only the subject's name, phone number, and blood pressure were recorded. Personal health data were gathered later by phone or in person. These data, including blood pressure measurements, were written in English and entered for subsequent computer analyses.

Findings

Findings gathered from the forms used in blood pressure screening and the blood pressure measurements are categorized into (*a*) demographic profiles, (*b*) family heart health histories and personal health status, and (*c*) heart health awareness of subjects. These data are displayed in the table, page 307.

Demographic profiles. The proportions of this sample reflect the ethnic distribution and persuasive abilities of the cadre to recruit subjects. We have proportionally about twice as many Cambodian cadre as Vietnamese cadre; this may explain why there are twice as many Cambodians as Vietnamese in the sample. In addition, one Cambodian had several community contacts because of her job and is particularly outgoing. Nine Amerasians (progeny of white or black father and Southeast Asian mothers) were included in this study. However, their numbers are too few to influence the overall baseline characteristics.

In terms of sex, men outnumbered women.

These numbers are indicative of the Southeast Asian population in Ohio where men slightly outnumber women. However, the fact that our sample was 58 percent male also suggested a potential sociocultural bias because men were more likely than women to be available outside the home at the sites where our cadre contacted them.

The great majority (84 percent) of subjects were typically ages 49 and younger. This percentage also reflects the proportionally young adult nature of the Southeast Asian refugee population previously observed in the United States (*20*) and in central Ohio (*21*). More than half (56 percent) of the sample had been in the United States for 5 years or less.

The variables of "payment mechanism for health care" and "occupation" were included in this demographic profile as measures of socioeconomic status (SES). Of these two items, the payment mechanism for health care was the better indicator of SES for two reasons. First, our request to inquire about the educational levels of our target population was vetoed by our project's Southeast Asian leaders on the Project Steering Committee (one leader per ethnic group who emerged to be the spokesperson). Second, only 44 percent of the sample responded to the question on one's occupation, while 99.5 percent responded to the question on the payment mechanism for health care. (The veto on the use of educational level, a typical SES indicator in other studies, may be due to the high value placed on education by a majority of Asians and the disadvantages that Southeast Asians from war-torn lands have had in achieving that educational parity before coming to the United States.) The payment mechanism for health care was therefore deliberately selected as a proxy SES indicator. This SES indicator suggests that a significant proportion of our target population is on Medicaid, 45 percent.

Demographic composition, family heart health histories and personal health status, and heart health awareness of 397 respondents in the "Heart Health for Southeast Asians in Franklin County, Ohio" Project, January–October 1989

Category	Number	Percent
Ethnicity:		
Amerasians	9	2.3
Cambodians	185	48.3
Laotians	88	23.0
Vietnamese	101	26.4
Unspecified, but Asian	14	...
Sex:		
Men	220	57.6
Women	162	42.2
Unspecified	15	...
Ages:		
18–19 years	30	8.0
20–29 years	92	24.7
30–39 years	127	34.0
40–49 years	63	16.9
50–59 years	37	9.9
60 or older	24	6.4
Unspecified	24	...
Years in the United States:		
5 years or less	213	56.1
6 years or more	167	43.9
Unspecified	17	...
Payment mechanism for health care:		
Medicaid	162	44.8
Employer's health plan	120	33.1
Self-pay	45	12.4
Other	35	9.7
Unspecified	35	...
Family heart health history:		
Yes	5	1.3
Unspecified	24	...
Previously diagnosed hypertensive:		
Yes	10	2.5
Unspecified	25	...
Heart health awareness:		
Did not know what blood pressure is	372	93.8
Did not know what could be done to prevent heart disease	337	85.0

Family heart health history, personal heart health status. As indicated by the table, a relatively low percentage of the sample mentioned family members who had a history of heart disease, stroke, or blood pressure problems. Only 1 percent indicated that they had been previously diagnosed by physicians as hypertensives, and 2 percent reported that they were currently taking medication for blood pressure. Seventeen percent of this sample were operationally defined as being hypertensive on the basis of having systolic blood pressure levels greater than or equal to 140 millimeters mercury (mm Hg), diastolic greater than or equal to 90 mm Hg, based on a cadre member's single reading or because they reported being on medication for hypertension. In comparison, 22 percent of adult Ohioans in 1988 were considered hypertensive (personal communications from Ellen Capwell, Director, Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, Columbus). Thus, besides the younger overall age distribution of this sample, being relatively recent immigrants to this country may explain the lower prevalence of hypertension among Southeast Asians compared with the general population. While this statistic may appear comforting, the next section will reveal why ethnically endorsed and scientifically valid prevention strategies are needed (see table).

'Calendars were printed in each of the Southeast Asian languages, and one-sentence long heart health education messages were displayed with each month. In addition, the English sentence, "Your health depends on your heart," and its equivalent in three Southeast Asian languages, placed around the picture of Angkor Wat, was the heart health motto of the year.'

Heart health awareness. The consequences of no exposure to public health education on cardiovascular health were most vividly displayed in the very high percentage (94 percent) of subjects who had no knowledge of what blood pressure is and did not know what could be done to prevent heart disease (85 percent). Thus, while the prevalence of hypertension may be lower than among the majority of adult Ohioans, the awareness level of cardiovascular health is very low and the groundwork should be laid now to initiate effective, ethnically approved, and scientifically valid prevention efforts. Otherwise, with increasing acculturation, the Southeast Asian population may assume the hypertension risk profile of the majority population.

Implications for Designing Interventions

Faced with these data, we realized that multiple heart health education strategies would be necessary to reach our diverse target population. As part of our grant proposal to the Office of Minority Health, we proposed that our cadre do one-to-one counseling. That counseling was primarily based on what was taught in the previously mentioned Red Cross course and hence did not include detailed instruction on cardiovascular physiology.

In addition, we offered cooking classes based on the American Heart Association Culinary Hearts Kitchens course adapted for Southeast Asian foods. One course per ethnic group was offered. Attendance was unexpectedly poor (less than 20 per group). We knew that ethnic direction and approval of what we believe to be scientifically valid intervention efforts would be necessary.

As one might suspect, we explored the use of printed materials. We learned that, despite the availability of some heart health education materials in Southeast Asian languages, most printed materials appeared to be translations of what had originally been written in English. These materials also tended to be pamphlets or brochures. The reading levels and vocabulary used also seem to require considerable schooling. Materials such as these did not seem to appeal to our Southeast Asian associates. These materials also did not seem to be "durable," that is, read or used beyond the moment of receipt.

On the other hand, we learned that calendars were very acceptable and attractive to Southeast Asians. Therefore, through our Southeast Asian-led Public Education Committee, we developed a 1990 calendar with a photograph of Angkor Wat (a prominent Southeast Asian landmark) with a heart health slogan for each month. Calendars were printed in each of the Southeast Asian languages, and one-sentence long heart health education messages were displayed with each month. In addition, the English sentence, "Your health depends on your heart," and its equivalent in three Southeast Asian languages, placed around the picture of Angkor Wat, was the heart health motto of the year. These calendars were distributed to families through the cadre in their home visits or in contacts at community centers such as places of worship and Asian markets.

At about the same time, through one of our Southeast Asian leaders, we learned that as many as 98 percent of Southeast Asians have access to video cassette recorders in their homes. The borrowing of Asian movies on VCR tapes from ethnic grocery stores is a very popular pasttime for many Southeast Asians. Therefore, we initiated a project utilizing VCRs related to heart health that we have made available through the same outlets as Asian movies on VCR. One of the tapes features footage about Cambodia in 1990, the Laotian version features a Laotian playing a traditional musical instrument, and the Vietnamese version features the 1990 Vietnanese New Year (Tet) celebration. Each of these versions is narrated in its own Southeast Asian language and includes a "commercial" endorsing blood pressure measurements by their respective ethnic leaders as well as four other heart health "commercials." Our belief is that our target population will want to view these VCR tapes and thus will be exposed to our heart health "commercials." Each tape is approximately 45 minutes long, and they are loaned without charge. (Funding for the development of these videotapes was through the Ohio Commission on Minority Health. The

cadre helped to distribute them to various sites.)

Finally, we cannot neglect the power of word-of-mouth in basic heart health education. Despite the tools we are using—cooking classes, calendars, and VCRs—our cadre carry the main thrust of this project to reduce the knowledge deficit in cardiovascular health among Southeast Asians. With the baseline data that we have collected and our insistence on both ethnic approval and scientifically valid interventions, we believe that the more indigenous this effort becomes, the more likely that cardiovascular health education for Southeast Asians will become culturally sensitive, self-perpetuating, and institutionalized. After all, should not the goal for all our community-based heart health education efforts be that of initiating and sustaining indigenous efforts for promoting heart health?

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